

What is claimed is:

1. A method of treating a non-malignant disease or disorder involving abnormal activation or production of an ErbB receptor or ErbB ligand in a mammal, comprising administering to the mammal a therapeutically effective amount of an antibody which binds ErbB2.
2. The method of claim 1 wherein the antibody blocks ligand activation of an ErbB receptor.
3. The method of claim 2 wherein the antibody blocks binding of monoclonal antibody 2C4 to ErbB2.
4. The method of claim 1 wherein the disease or disorder involves abnormal activation of EGFR.
5. The method of claim 4 wherein the abnormal activation is caused by overexpression of an ErbB ligand.
6. The method of claim 5 wherein the ErbB ligand is transforming growth factor alpha (TGF- $\alpha$ ).
7. The method of claim 1 wherein the antibody blocks TGF- $\alpha$  activation of mitogen-activated protein kinase (MAPK).
8. The method of claim 1 wherein the antibody has a biological characteristic of monoclonal antibody 2C4.
9. The method of claim 8 wherein the antibody comprises monoclonal antibody 2C4 or humanized 2C4.
10. The method of claim 1 wherein the antibody is an antibody fragment.
11. The method of claim 11 wherein the antibody fragment is a Fab fragment.
12. The method of claim 1 wherein the antibody is not conjugated with a cytotoxic agent.
13. The method of claim 10 wherein the antibody fragment is not conjugated with a cytotoxic agent.
14. The method of claim 1 wherein the antibody is conjugated with a cytotoxic agent.
15. The method of claim 1 further comprising administering to the human a therapeutically effective amount of a second therapeutic agent selected from the group consisting of another ErbB antagonist, an immunosuppressive agent, chemotherapeutic agent, cytotoxic agent, growth inhibitory agent, EGFR-targeted drug, tyrosine kinase inhibitor, anti-angiogenic agent, anti-hormonal compound, cardioprotectant, and cytokine.

16. The method of claim 1 comprising administering at least one dose of the antibody to the human in an amount from about 0.5mg/kg to about 30mg/kg.
17. The method of claim 1 wherein the mammal is a human.
18. The method of claim 1 wherein the disease or disorder is a benign hyperproliferative disorder.
19. The method of claim 1 wherein the disease or disorder is psoriasis.
20. The method of claim 1 wherein the disease or disorder is endometriosis.
21. The method of claim 1 wherein the disease or disorder is scleroderma.
22. The method of claim 1 wherein the disease or disorder is a vascular disease.
23. The method of claim 23 wherein the vascular disease or disorder is selected from the group consisting of arteriosclerosis, vascular reobstruction, atherosclerosis, postsurgical vascular stenosis, restenosis, vascular occlusion or carotid obstructive disease, coronary artery disease, angina, small vessel disease, hypercholesterolemia, hypertension, and conditions involving abnormal proliferation or function of vascular epithelial cells.
24. The method of claim 1 wherein the disease or disorder is colon polyps.
25. The method of claim 1 wherein the disease or disorder is fibroadenoma.
26. The method of claim 1 wherein the disease or disorder is a respiratory disease.
27. The method of claim 27 wherein the respiratory disease is selected from the group consisting of chronic bronchitis, asthma, cystic fibrosis, bronchiectasis, rhinitis, sinusitis,  $\alpha$ 1-antitrypsin deficiency, cough, pulmonary emphysema, pulmonary fibrosis, hyper-reactive airway, chronic obstructive pulmonary disease, chronic obstructive lung disorder and hypertension.
28. An article of manufacture comprising a container and a composition contained therein, wherein the composition comprises an antibody which binds ErbB2, and further comprising a package insert indicating that the composition can be used to treat a non-malignant disease or disorder, where the disease or disorder involves abnormal activation or production of an ErbB receptor or ErbB ligand.
29. A method of treating psoriasis comprising administering a therapeutically effective amount of an antibody which binds ErbB2 to a patient.

30. The method of claim 29 wherein the antibody blocks ligand activation of an ErbB receptor.
31. The method of claim 29 wherein the antibody is monoclonal antibody 2C4 or humanized 2C4.
32. The method of claim 29 further comprising treating the patient with a therapeutically effective amount of a second drug selected from the group consisting of immunosuppressive agent, cyclosporine, tacrolimus (FK506), DAB389 IL2, chemotherapeutic agent, methotrexate, psoralen, steroid, glucocorticosteroid, prednisone, methylprednisolone, OKT-3 monoclonal antibody, azathioprine, bromocryptine, heterologous anti-lymphocyte globulin, anti-LFA-1 antibody, efalizumab, antibody that binds to B-cell surface antigen, anti-CD20 antibody, Rituximab, TNF antagonist, Ethanercept, Infliximab, D2E7, CDP-870, IL-1 antagonist, Kineret, IL-10 agonist, COX-2 inhibitor, another ErbB antagonist, EGFR-targeted drug, tyrosine kinase inhibitor, methoxsalen, hydrocortisone, calcipotriene, anthralin, coal tar, betamethasone, betamethasone acetate/betamethasone sodium phosphate, cortisone acetate, dexamethasone, dexamethasone sodium phosphate, methylprednisolone acetate, hydrocortisone sodium phosphate, prednisolone, and prednisolone sodium phosphate and/or subjecting the patient to phototherapy.
33. A method of treating endometriosis comprising administering a therapeutically effective amount of an antibody which binds ErbB2 to a patient.
34. The method of claim 33 wherein the antibody blocks ligand activation of an ErbB receptor.
35. The method of claim 33 wherein the antibody is monoclonal antibody 2C4 or humanized 2C4.
36. The method of claim 33 further comprising administering a therapeutically effective amount of a second drug selected from the group consisting of another ErbB antagonist, EGFR-targeted drug, tyrosine kinase inhibitor, immunosuppressive agent, hormone, oral contraceptive, progestin, Danazol, ganodotropin-releasing hormone (GnRH) agonist, phytoestrogen, isoflavone, antiestrogen, benzothiophene, droloxifene, benzofuran, aromatase inhibitor, norethindrone acetate, leuprolide acetate, nafarelin acetate, clavulanate potassium/ticarcillin disodium, and goserelin acetate, to the patient.
37. A method of treating vascular disease or disorder comprising administering a therapeutically effective amount of an antibody which binds ErbB2 to a patient.
38. The method of claim 37 wherein the vascular disease is selected from the group consisting of arteriosclerosis, vascular reobstruction, atherosclerosis, postsurgical vascular stenosis, restenosis, vascular occlusion or carotid obstructive disease, coronary artery disease, angina, small vessel disease,

hypercholesterolemia, hypertension, and conditions involving abnormal proliferation or function of vascular epithelial cells..

39. The method of claim 37 wherein the antibody blocks ligand activation of an ErbB receptor.
40. The method of claim 37 wherein the antibody is monoclonal antibody 2C4 or humanized 2C4.
41. The method of claim 37 further comprising administering a therapeutically effective amount of a second drug selected from the group consisting of propranolol hydrochloride, another ErbB antagonist, EGFR-targeted drug, tyrosine kinase inhibitor, and a drug which modulates blood pressure, a drug that reduces cholesterol, an antioxidant, an agent that modulates adhesion molecules such as ICAM 1, 2 and 3, VCAM-1 or PECAM-1, lipid lowering agent, anti-platelet agent, anti-thrombotic agent, calcium channel blocker, angiotensin converting enzyme (ACE) inhibitors,  $\beta$ -blocker, ticlopidine, clopidogrel, anti-tissue factor antibodies or antagonists, oral Factor VIIa inhibitor, bivalindin, NapC2, Loverox, fragranin, ARB ACE receptor antagonists, hirudin, hiruleg, melagatron, eptifibatide, abciximab, and aspirin.
42. A method of treating a respiratory disease comprising administering a therapeutically effective amount of an antibody which binds ErbB2 to a patient.
43. The method of claim 42 wherein the respiratory disease is selected from the group consisting of chronic bronchitis, asthma, cystic fibrosis, bronchiectasis, rhinitis, sinusitis,  $\alpha$ 1-antitrypsin deficiency, cough, pulmonary emphysema, pulmonary fibrosis, hyper-reactive airway, chronic obstructive pulmonary disease, chronic obstructive lung disorder and hypertension.
44. The method of claim 42 wherein the antibody blocks ligand activation of an ErbB receptor.
45. The method of claim 42 wherein the antibody is monoclonal antibody 2C4 or humanized 2C4.
46. The method of claim 42 further comprising administering a therapeutically effective amount of a second drug selected from the group consisting of immunosuppressive agent, prednisone, short acting beta-agonist, atropineergic bronchodilator, long acting bronchodilator, inhaled steroid, IgE antagonist, anti-IgE antibody, humanized anti-IgE antibody, omalizumab, another ErbB antagonist, EGFR-targeted drug, tyrosine kinase inhibitor, zafirlukast, albuterol sulfate, fluticasone propionate/salmeterol xinafoate, flunisolide, theophylline, metaproterenol sulfate, ipratropium bromide, triamcinolone acetonide, terbutaline sulfate, betamethasone acetate/betamethasone sodium phosphate, betamethasone, albuterol sulfate/ipratropium bromide, cortisone acetate, dexamethasone, dexamethasone sodium phosphate, methylprednisolone acetate, albuterol sulfate/ipratropium bromide, fluticasone propionate, formoterol fumarate, hydrocortisone, hydrocortisone sodium phosphate, dyphylline, dyphylline/guaifenesin, pирbutерол acetate, prednisolone sodium phosphate, potassium iodide, prednisone, epinephrine,

ephedrine hydrochloride/guaifenesin, albuterol sulfate, albuterol, budesonide, beclomethasone dipropionate, salmeterol xinafoate, montelukast sodium, methylprednisolone sodium succinate, beclomethasone dipropionate, albuterol, levalbuterol hydrochloride, zileuton, ipratropium bromide, terbutaline sulfate, potassium iodide, salmeterol xinafoate, moxifloxacin hydrochloride, sulfamethoxazole/trimethoprim, clarithromycin, cefaclor, ceftibuten dihydrate, cefuroxime axetil, cefprozil, ciprofloxacin, ciprofloxacin hydrochloride, ofloxacin, levofloxacin, loracarbef, cefdinir, cilastatin sodium/imipenem, sulfamethoxazole/trimethoprim, cefditoren pivoxil, cefixime, gatifloxacin, and cefpodoxime proxetil, to the patient.